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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/527,529	03/16/2000	Hironori Kikkawa	69605/99	2200

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EXAMINER

NGUYEN, DUNG T

ART UNIT PAPER NUMBER

2871

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 09/527,529	Applicant(s) KIKKAWA ET AL.	
	Examiner Dung Nguyen	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2871

DETAILED ACTION

Applicant's amendment dated 01/09/2007 has been received and entered. Claims 1-6, 10-12 and newly added claims 13-20 are now pending in the application. Claims 7-9 stand withdrawn from consideration.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 3-6 and 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raynes et al., US Patent No. 5,541,753, in view of Aoki et al., US Patent No. 6,115,014.

Regarding claims 1, 3-6, 10-12 and 14-20, Raynes et al. disclose a liquid crystal display (LCD) device (figure 6) comprising:

- . a pair of substrates (6, 7);
- . a liquid crystal layer (12), wherein liquid crystal molecules oriented to bend alignment;
- . a phase compensation plate (30, 31) provided outside of each of the substrates;
- . a retardation of a light passing through the liquid crystal layer and all phase compensation plates being limited to a value $\lambda/2$ or $\lambda/4$ (when $M=1$) and λ is a wavelength of visible light (claim 10);
- . a circuit (3).

Although Raynes et al. do not explicitly disclose a retardation value of a minimum wavelength of the light relating to display (i.e., blue color range of 380nm to 488nm), Raynes et al. do disclose that the retardation value of visible wavelength (i.e., range of 400nm to 700nm).

Art Unit: 2871

Thus, such disclosed range in Raynes et al. makes possible the claimed range of 380nm to 488nm, and such overlapping ranges are at least obvious. *In re Malagari*, 499 Fed.2d 1297, 182 USPQ 549 CCPA 1974.

Regarding claims 13, Raynes et al. do not explicitly disclose voltages being equalized for all colors in display. Aoki et al. do disclose that an LCD display can be applying a same voltage to a plurality of frames (e.g. color pixels) in accordance with a display color designated (see claim 2). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to modify the Raynes et al display device in view of the Aoki et al. in order to provide an LCD apparatus capable of displaying multiple colors with low consumed power (see col. 1, ln 52).

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raynes et al., US Patent No. 5,541,753 , in view of Applicant's submitted prior art, Kuo et al., SID 94 Digest, Volume XXV, page 927-930.

Regarding claim 2, Raynes et al. disclose the claimed invention as described above except for a birefringent index of the liquid crystal molecules is equal to or less than 0.16. However, Kuo et al. do disclose liquid crystal molecules having a birefringent index which is less than 0.16 (see table 2) can be used in an LCD device. Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to modify the Raynes et al. liquid crystal molecules having a birefringent index which is less than 0.16 as shown by Kuo et al. in order to reduce a retardation value of a liquid crystal layer, so as to reduce light leakage in the large viewing angle of an LCD device(see page 929, left column, line 11).

Response to Arguments

Applicant's arguments filed 01/09/2007 have been fully considered but they are not persuasive.

Applicants' argument are as follow:

- a. Raynes fails to disclose a "bend alignment".
- b. there is no phase compensation plate on each of the two substrates as shown in figure

7.

- c. the rejection currently of record uses an improper legal standard of "overlapping ranges".

The Examiner's responses are as follow:

- a. The Examiner is not convinced by this argument since the same is true of the Raynes et al. bend alignment. In particular, although Raynes do not use the term of "bend alignment", Raynes et al. device clearly shown the bend alignment as set in figure 6 and accompanying text (e.g. pi-cell aligned). In other words, the aligned liquid crystal layer of the Applicant and the Raynes reference would be the same as well.

- b. it should be noted that the rejection is based on figure 6 rather than figure 7, in which two compensation plates (30/31) clearly disposed on each of the two substrate (6/7).

- c. The Examiner respectfully disagrees with Applicant's viewpoint. In particular, such visible wavelength would be known and critical in the display art; therefore, such overlapping ranges would be at least obvious. In addition, the Applicants have not provided any support/evidence to show such Applicants' claimed ranged being a critical parameter; so as, such claimed ranged would have been obvious in view of Raynes.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

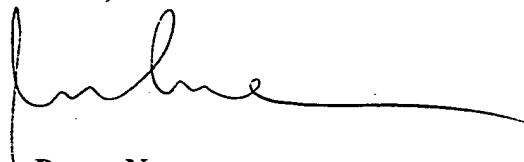
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN
04/02/2007

A handwritten signature in black ink, appearing to read 'Dung Nguyen', with a long horizontal flourish extending to the right.

Dung Nguyen
Primary Examiner
Art Unit 2871